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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,754	06/26/2003	Dennis P. Sarr	BOEI-1-1150	7340
46020	7590	06/14/2005	EXAMINER	
BLACK LOWE & GRAHAM PLLC 701 FIFTH AVENUE, SUITE 4800 SEATTLE, WA 98104			MONBLEAU, DAVIENNE N	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/607,754	Applicant(s) SARR, DENNIS P.	
	Examiner Davienne Monbleau	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 and 25-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/26/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of group II in the reply filed on 4/7/05 is acknowledged.

Claims 1-13 and 25-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/7/05.

An action on the merits for Claims 14-24 follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chervenak et al. (U.S. 5,558,692) in view of Skunes et al. (U.S. 5,005,978).

Regarding Claim 14, *Chervenak* teaches in Figure 1a a device for measuring runout of a rotating object (2), the device comprising a sensing unit (8) including a source of coherent electromagnetic radiation (12), the source (12) being configured to direct the coherent electromagnetic radiation at a surface of a rotating object (2) having an axis (4), the surface of the rotating object (2) being displaced from the axis (4) by a displacement, a sensor (14) configured to receive reflected coherent electromagnetic radiation from the surface of the rotating object (2) such that the path of the reflected coherent electromagnetic radiation can be

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determined based upon the received coherent electromagnetic radiation, and a transducer (16) configured to produce a signal representative of the determined path of the reflected coherent electromagnetic radiation, a processor (20) in signal communication with the sensing unit (8), the processor (20) being configured to receive the signal from the transducer (16), a memory (column 2 lines 57-60) in signal communication with the processor (20), the memory containing a program of instructions to be executed by the processor (20), the program being configured to instruct the processor (20) to receive the signal from the transducer (16) and to-determine the displacement based upon the instruction, and an output device in signal communication with the processor and configured to indicate the determined displacement (there must be an output device in order for a user to know the determine displacement). *Chervenak* does not teach that said rotating object is a tool. *Skunes* teaches in Figure 1 a laser based non-contacting measurement instrument for measuring the runout of a rotating tool. It would have been obvious to one of ordinary skill in the art at the time of the invention to use rotating tool in *Chervenak*, as taught by *Skunes*, to detect sum-millimeter deviations in the geometry of the tool and have continuous measuring capabilities.

Regarding Claim 15, *Chervenak* teaches in Figure 1a that the rotating object completes a rotation in one period (column 7 lines 34-40), the processor (20) determines a plurality of displacements in the one period (Figure 1c), and the output indicates each displacement.

Regarding Claim 16, *Chervenak* teaches in Figure 1c that the processor (20) determines from the plurality of displacements, a maximum displacement and a minimum displacement.

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Regarding Claim 17, *Chervenak* teaches in Figure 1 determining the runout of a rotating object: the deviation of the object from cylindrical symmetry which includes deviation from roundness or straightness. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to subtract the minimum displacement from the maximum displacement to determine the range of runout. *Chervenak* further teaches in column 6 lines 35 to column 8 line 52 various methods of determining runout based upon the deformity of the rotating object.

Regarding Claim 18, *Chervenak* teaches in column 6 lines 22-25 an indexing mark on the surface of the rotating object.

Regarding Claims 19 and 20, *Chervenak* teaches in column 6 lines 22-25 that any convenient mark may be used.

Regarding Claims 21-24, *Chervenak* teaches in column 6 lines 35 to column 8 line 52 various methods of determining runout based upon the deformity of the rotating object, but does not specifically teach an averaging method. It would have been obvious, however, to one of ordinary skill in the art at the time of the invention to determine the runout of the object based on the average of a plurality calculations from a plurality of rotation periods to determine the most accurate runout measurement possible. Calculating the runout from more than one set of data (from one rotation period) increases the accuracy.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because they teach various methods of measuring runout of a rotating object.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 571-272-1945.


The examiner can normally be reached on Mon-Fri 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Davienne Monbleau

DNM


Stephone B. Allen
Primary Examiner